COMMUNITY BASED BIODIVERSITY CONSERVATION PROJECT (CBCP)

Submitted to
Rufford Small Grant (for Nature Conservation)/Whitley Awards Foundation

Rhododendron flowering in demonstration plot

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Abbreviations

CBCP	Community Based Biodiversity Conservation Project
CBD	Convention on Biological Diversity
CBOs	Community Based Organisations
CDO	Chief District Administrator
CF	Community Forests
CFUG	Community Forest User Group
CIC	Community Information Centre
DFO	District Forest Office
FECOFUN	Federation of Community Forest Users, Nepal
M&E	Monitoring and Evaluation
MoFSC	Ministry of Forests and Soil Conservation
OP	Operational Plan
RSG	Rufford Small Grant
VDC	Village Development Committee

1.0 INTRODUCTION AND BACKGROUND

This is a final report submitted to the Rufford Small Grant (for Nature Conservation) – a first RSG grant award for the project "COMMUNITY BASED BIODIVERSITY CONSERVATION PROJECT, (CBCP)". The project was implemented during December 2005 to March 2007 in collaboration with the Federation of Community Forest Users, Nepal (FECOFUN) district chapter – Parbat and the Bharkhore Community Forest User Group, Parbat. The report includes final performances of the CBCP. The aim of the project was to develop a model user group demonstrating active forest management and biodiversity conservation leading to a win-win situation in community forestry in Nepal. The project also completed documentation of biodiversity at users' level using Community Forest User Group (CFUG) as an appropriate institution for biodiversity registration at local level.

1.1 Basis of the CBCP

Community forestry was formally launched in Nepal since late 70's to increase participation and control of local people in forest management. It has received highest priority within the forestry sector which is the biggest social mobilization process in Nepal involving more than one third of the total households. Emerging evidences indicated that CFUGs have selective behaviours over the species mainly based on households' level utilitarian benefits. CFUGs often have identified all most all shrub and low quality timber species as non-preferred. These selective species approach of maintaining and removal caused altered forest structure and composition leading to monoculture forest structure. The effect of present forest management strategy can lead to negative consequences to biodiversity conservation in various ways. Firstly, forest types are slowly converting from diverse to more homogenous species composition. Secondly, the shrub and tree diversity is gradually decreasing with a gradual loss of species at local level, which have no particular fuel, timber or fodder value. The most critical threat is for shrubs and low quality timber species. Lastly, the drastic change in microclimatic environment within the forest is unfavourable to many soils born and small life forms. The rapid and human induced disturbance modifies natural environment, ecological process and systems through the mechanism of species preferences and silvicultural application. In addition, there is serious lack of baseline - biodiversity information at local level.

The present project investigated biodiversity conservation and forest management aspects in community forestry in Nepal. It conducted skill and awareness enhancement activities on conservation of forest ecosystems through training and extension and conservation oriented development activities. The CBCP focused to conduct environmental conservation activities and demonstrate approaches for integration of biodiversity conservation into community forest management. Similarly, it contributed to strengthen linkage and support with different stakeholders such as community level networking organisation (FECOFUN), government line agencies, and community forest user groups for the conservation of biodiversity. In addition, the project mobilized community forest user group's fund for biodiversity conservation and documenting biodiversity.

2.0 CONSERVATION COMPONENTS AND ACTIVITIES

The CBCP implemented 28 different activities under five different components. The list of CBCP conservation components and activities performed is presented in the table 1.

Table 1: Conservation components and proposed activities

Components	Activity
(1) Conservation of biodiversity	1. Assessment of Floral and faunal diversity in Bharkhore CFUG
	2. A Revision of existing Operation plans incorporating bio-diversity issues
	3. A Formation of CFUG network at VDC level
	4. *In situ* conservation of unique floral species
	5. *Ex-situ* conservation of important species through private forestry/CF action
	6. Promoting alternative energy biogas
(2) Capacity building	1. Training on identification of important species, habitats and their conservation and best practices
	2. Training on domesticating valuable multipurpose species
	3. Training on income generation activities through development of agro-forest based enterprises
	4. Publication of brochures on bio-diversity status of Bharkhore CFUG- local language
	5. VDC and local level sharing workshops
	6. Training on capacity building of local level service providers
(3) Environment protection and forest conservation	1. Defining participatory biodiversity conservation criteria at CFUG level
	2. Identification of threatened, rare and endangered species at CFUGs level
	3. Establishment of demonstration plot
	4. Expanding through VDC/local level workshop
	5. Mobilize Community Forestry Fund for IG activities
(4) Strengthening linkage and support with FECOFUN and other agencies	1. Support various line agencies in conducting ecosystems conservation activities
	2. Institutional development
	3. Monitoring and Evaluation
	4. Support to various local level CBOs
	5. School support programs for biodiversity conservation
5. Community biodiversity registration	1. Build the capacity of CFUGs
	2. Establish community biodiversity registration process
	3. Establishment of Community Information Centre (CIC)
	4. Collection, documentation and dissemination of information through the CIC
	5. Coordination and evaluation
	6. Biodiversity fare at VDC level

3.0 WORKING APPROACH

The approach of the CBCP was highly participatory, and the activities undertaken were based entirely on the people's articulation of their needs and priority. The project was initiated with a half day start up workshop held in the CFUG office in first week of December 06. The aim of the workshop was to provide information and share activities of the project with the local community people and other stakeholders. The workshop developed work plan and output level monitoring and evaluation (M&E) plan for effective and successful implementation of the project. The start-up workshop was useful for an easy implementation of the project activities. During the meeting, it was also agreed that the activity implementation decision will be made in participatory way.

3.1 Participatory decision making

The CBCP was implemented in close collaboration with the FECOFUN Parbat district chapter and Bharkhore Community Forest User Group, Parbat. The decisions on project activities specifically related to Bharkhore CFUG were made by the forest user group while other district level and managerial decisions were taken in partnership with the FECOFUN district chapter. The secretarial service was made available in collaboration with FECOFUN district office space.

3.2 Stakeholders' collaboration

The CBCP worked in a model of multi-stakeholders forum ranging from local to district level users, civil society to government officers. The Chief District Administrator (CDO) from District Administration Office actively participated in CBCP activities (Photo 3). Similarly, the Local Development Officer from District Development Office, District Forest Officers from District Forest Offices, other officials from district development and administrations offices were actively involved in various activities. Such involvement has huge social importance and recognised values to influence nearby users and local people. In addition, locally based community based organisations such as Mother Group and non governmental organisations have helped developing local ownership of stakeholders.

3.3 Program diary

A program diary was developed and maintained for each of the activity conducted. The diary included date, objectives, functions carried out, expected outputs, expenses and the responsible person and organisations by activities. The details of events accomplished for each activity was recorded by date. The diary was found to be instrumental for planning and to facilitate monitoring of each activity. The diary also helped for timely and effective implementation of the project. The maintenance of program through diary and sharing with other stakeholders was useful in maintaining transparency of the program to its stakeholders.

4.0 PROJE CT PERFORMANCE

The quantitative performance of the CBCP is presented in the Annex 1 against the proposed work plan. The major outcomes of the project is presented in the following section.

4.1 Major achievements

The major outcomes of the project included creation of base line information on biodiversity, community fund investing for biodiversity conservation, community documentation of biodiversity, income generation activities addressing biodiversity conservation, promoting innovations to biodiversity conservation, reducing pressure to forest products through alternative energy support such as biogas energy, developing mechanism for local people's financial contribution towards biodiversity conservation and broadening the role of FECOFUN as civil society organisation for biodiversity conservation. A brief description of each of the major achievements is highlighted below.

4.2 Baseline information

The Bharkhore Forest was handed over as a community forest to the local people in 1993. It is predominantly sal (*Shorea robusta*) dominated sub-tropical forest. The forest is divided into five blocks. Forest management activities like plantation, singling, thinning, shrub and climber cutting (*Jhadi safai*), pruning, singling and plantation are carried out in one block each year. Amriso (*Thysanolaena maxima*) plantation has been beneficial for stabilizing slopes and conserving soils.

A total of 76 plant species including 29 trees, 7 shrubs and 40 herbs were recorded during forest inventory in the forest. There are several species which were not observed in the inventory plots and information in this regards is given in biodiversity registration section (4.6). The diversity indexes of tree and shrub are almost similar whereas herb indexes is higher than tree and shrub. Similarly, the richness index of herb is significantly higher compared to shrub and tree. The grazing restriction has positive effect on herb richness. The complete list of plant species recorded during forest inventory is given in Annex 2.

Table 2. Diversity and richness indexes

Number of species			Diversity index (H')			Richness index		
Tree	Shrub	Herbs	Tree	Shrub	Herbs	Tree	Shrub	Herbs
29	9	41	1.38	1.48	2.17	3.70	1.75	5.65

Note: Herbs include herbs, grasses and climbers

The users provided very valuable information on trends of species availability in the forest into different category. It was found that some species have recently appeared in the forest while others are decreasing in the forest. For example- plants such as Tooni (*Toona ciliata*), Gindari (*Premna intgrifolia*), Harro (*Terminalia chebula*), Barro (*Terminalia belerica*) and Amala (*Emblica officinalis*) have appeared whereas among animals Chituwa (annexed CITES species) and Ratuwa (deer) appeared after people begun to conserve the forest. On the other hand, species like Damaru (*Maclura cochinchinesnis*) and Maidal (*Randia dumetorum*) are decreasing due to their removal every year during forest

management operations. No plant species lost was recorded from the CF within the past 15 years. However, the users have repeatedly mentioned that they have loss all species of eagle and vulture from their forest. But users have observed appearance of two weeds Nilopoke and Banmara (*Eupatorium adenophorum*). In case of wild animals, common leopard and deer have recently appeared in the CF. A list of species status trend is presented in the Annex 3. The list shows that a total of 52 species have shown dynamism where 18 species are under threat, 20 species are decreasing and 14 species are increasingly available.

4.3 Selective approach and biodiversity conservation

The users are more interested towards the tangible benefits from community forest. It obviously leads to selective approach for the species. Presently, they want to retain species that give direct benefits. Multipurpose tree species have higher chances for promotion. Sal (*Shorea robusta*) is the most preferred species followed by Chilaune (*Schima wallichi*) and Salla (*Pinus roxburghii*). The users do not prefer low quality timber, shrub and climber species and many of the grasses and herbs. Banmara (*Eupatorium adenophorum*), Titepati (*Artemesia vulgaris*), Nilopoke, Jhuttekauso, Unnue (*Gleichenia species*), Damaru (*Maclura cochinchinensis*) and Maidal (*Randia dumetorum*) are some of the species, which have no direct use values. Low quality timber and almost all shrub species were unwanted species and the management activities are focused towards removing them in favour of sal and other multipurpose species. The impact of the selective species on forest vegetation was observed in ecological indexes of the forest leading towards pure sal forest.

Existing relative density of sal is above 95 % in CF. It is leading towards the development of monoculture sal species forest. It will have negative implications for biodiversity conservation through community forestry, particularly in the Mid-Hills. In addition, people prefer animals that do not harm them. They do not prefer the animal species that harm to their crops and livestock like Common leopard, Monkey and Squirrels and want to be disappeared from the forest

Table 3. Density of tree species (sapling, pole and tree)

Total density (No/ha)	Density of Sal (No/ha)	Relative density of Sal (%)
1,797	1,716	95.5

The discussion from the local people revealed that there are specific criteria to retain or remove a species usually based on usefulness of species. This process takes place during silvicultural operations. The criteria for retaining a species are its usefulness of forest products. This clearly distinguishes the preference for selection based on livelihood needs and biodiversity needs.

Criteria developed for removal of species include, shrubs, thorny species, dead dying and damaged individuals of all species, competing species and low quality timber species. User preference to retain tree species clearly indicates towards the value and importance of direct benefits emerging from species. The criteria promoted retention of multi-purpose tree species than single purpose species. Key preference criteria adopted on priority by the CFUG are;

- Timber species
- Specific use of species (agricultural implement - *Chilaune* has a specific use for making ploughs)
- Firewood
- Medicinal use
- Others (fodder, fruits etc)

4.4 Conservation through plantation

The project supported seedlings of 11 species identified as a priority species for plantation in private as well as community land (Annex 2). A total of 2,354 seedlings were distributed for plantation. In addition to the Bharkhore, these seedlings were planted by nearby five community forests within the VDC and one CFUG outside the VDC showing the implications of awareness activities. Similarly, 15 individual farmers planted about 480 seedlings in their private land. The monitoring of plantation is maintained by the FECOFUN in collaboration with the Bharkhore forest users group.

4.5 Alternative energy support

The project supported establishment of two biogas units to two farmers in Bharkhore CFUG. The biogas was established in collaboration with four partners. The government subsidy was maintained through Biogas Company where farmers are less benefited than the companies. The project supported cash amount to encourage plant establishment with a cash share from the CFUG. Finally, farmer paid all additional costs. The support program was highly demanded by the farmers as it provided substantial cash amount to farmers. It has not only positive implications in conserving forest by reducing firewood demand but also encouraging in maintaining more trees on farms to support livestock. Planting more trees will ultimately strengthen supply situation of fire wood reducing pressure to community forest. In addition, the improved health due to smokeless environment for cooking individual (specially women) attracted for higher demand for biogas establishment.

4.6 Biodiversity registration

One of the significant outcomes of the project is the completion of biodiversity registration of the Bharkhore CFUG. A scan copy of registration is presented in the Annex 4. The biodiversity registration process was completed by the members of the Bharkhore community forest user group using the registration format developed by the Ministry of Forests and Soil Conservation. At the beginning of the process, an orientation program was organised to local users to familiarise them with the objectives, recording format and its contents and process. The local people were involved for almost four months to complete the registration process. The biodiversity registration by a community forest user group is the first in the process of biodiversity registration in Nepal by the owner community themselves.

The biodiversity registration record shows that a total of 283 species were recorded including 223 plant species. It was observed that users have knowledge

on all level of biodiversity viz. gene level, species level and ecosystem level. The genetic level knowledge is documented in both the plant classification and animal classification. The number of species recorded has already showed tremendous knowledge than forester researcher biodiversity information of the same forest. For example, the earlier number of plant species recorded in the Bharkhore forest was 76 compared to 105 species found in Bharkhore forest alone. The registration record shows that forest users are more familiar with plant species compared to animal species, which may be due to heavy dependency on plant species for their livelihoods.

Similarly, the users have demonstrated enormous knowledge on habitat classification in forest and farms depending on the nature of the land and vegetation available. The farm habitat classification includes habitat type such as Khet (two types- lowland with irrigation and low land without irrigation), Bari (upland), Khor (protected farm land either khet or bari with few trees), Pakho (marginal land with shrub or trees), Kharbari (marginal land- maintained for grass fodder and thatch grass harvesting), Banjho (non-cropped land), Bhir (high slope land), Jabra (detached big land mass), Odhar (cave), Kholsa Kholisi (spring side), Mul (water sources), Dhungan (stony), Chaur (grassland), Pokhari (pond), sim (water regenerated land) Dhap (water logged), Kanla (part between two terraces), bhitrabari (homestead).

In the same way, forest area was classified on the basis of several criteria into different category such as:

1. Species dominancy based –sal, chilaune, salla, mixed, gurans,

2. Quality based- Ramro (good), thikai (medium), naramro (bad)

3. Plant life form based- Rukha (tree), jhadi (shrubby), Ghansa (Grassland), Khali (open)

4. Density based- Patalo (degraded), baklo (dense), khali/nango (open)

The biodiversity registration information is being shared with the Convention of Biological Diversity (CBD) focal point - Ministry of Forests and Soil Conservation and FECOFUN central secretariat. The information will be a valuable document for advocacy by the FECOFUN to highlight the local peoples rights and traditional knowledge for bio-prospecting as well as justify claim for biodiversity registration by local people. The information also published in Nepali language in local monthly newsletter called *Kalpabrikshya*. The biodiversity registration will have implications primarily on the search of appropriate institutions and the process of registration. The community biodiversity registration will contribute towards benefits sharing mechanism in biodiversity conservation and the importance given to traditional knowledge.

4.7 Biodiversity conservation demonstration

The biodiversity conservation extension approach was implemented through demonstration plat and various capacity development training activities. The

biodiversity conservation plot of 2 ha in size was established. The plot is unique in ecosystem combination. It contains of Rhododendron species (Photo 1). In addition, the capacity development activities included various activities of the project such as forest habitat identification, trainings, and biodiversity registration process, biodiversity fair has contributed for developing positive perspectives for biodiversity conservation.

4.8 Collective funds for biodiversity conservation

The project adopted a mechanism of fund sharing between local people through forest user group fund and district level federations in kind contribution (human resource support) for biodiversity conservation and registration process. The fund also was shared for income generating activities to poor families. The approach has positive significance due to development of ownership on biodiversity conservation activities and process by forest user group. Similarly, the ownership was developed to poor families by receiving financial contribution from the community forestry fund for poverty reduction activities and alternative energy support to the farmers. The community forestry fund was specifically shared in conservation efforts such as plantation of species, biogas establishment, goat rearing, and biodiversity registration.

4.9 Users networking for biodiversity conservation

The village development committee (VDC)- lowest local government- level networking of forest user group for biodiversity conservation activities was established and strengthened through various support activities. It was realised that biodiversity conservation initiatives should based at larger scale- landscape approach through CF networking- than the sizes of an individual community forest. The networking was useful to identify present biodiversity status and action necessary for the continuation of the conservation efforts. The network will be useful in transforming the experiences of the project to others forest user groups. The plantation of seedlings by all other 5 CFUGs is the implication of the networking.

4.10 Awareness creation

The project achieved unique success in creating awareness for biodiversity conservation among different stakeholders. The amendment of operation plan of the community forest, plantation on earth day, private and community plantation, biodiversity demonstration plots, folk song competition, local CBOs support activities, training activities, species and habitat conservation plots, biodiversity registration process and biodiversity fair were keys for farmer's awareness. The activities such as range post level quiz contest on biodiversity, essay competition, school support program were instrumental for school level biodiversity conservation awareness creation. Similarly, the line agencies were benefited from activities like earth day plantation, biodiversity fair, trainings and orientation workshop.

4.11 Capacity building

The project contributed capacity development activities at three level Viz. users' level, federation level and service providers level. The various training activities such as income generation, domestication, biodiversity registration at community level were major inputs for capacity buildings of local people. Similarly, the federation was benefited by participating community level and line agencies training. The different line agencies capability was enhanced through line agencies training activities.

4.12 Partnerships for biodiversity conservation

The project was able to work in partnership with various line agencies working in the districts such as DFOs, administration offices, soil conservation offices, federations, civil societies - CFUG, community organisations such as clubs, school students. It has demonstrated that ranges of organisation can worked together for biodiversity conservation initiation. The activities have also get commitment of help from VDC - local government - for natural resource conservation within its territory.

4.13 Bharkhore: a model user group

The Bharkhore community forest user group has demonstrated several activities related to forest biodiversity conservation and active forest management. Several approaches of biodiversity conservation were implemented by the project while the forest management activities were continued for increased supply of forest products and improved forest productivity. There was not a conflicting situation or environment for conservation and production. The user group was also model by showing a successful biodiversity registration process. The wider dissemination of this information will motivate other group to carry out registration process in respective forest user groups. The specific species conservation approach will further motivate to conserve unique habitat of each of the community forest user groups leading to over all strengthening of biodiversity conservation at mid hills.

5.0 LESSON LEARNED AND IMPLICATIONS

The first completion of biodiversity registration by the forest user group indicates that forest user groups are one of the best viable institutional options for biodiversity registration that can be considered for the registration by the national government. Further, the registration information is also more extensive, systematic and organised compared to biodiversity registration completed by the consultants. This may mainly due ownership and "own feelings" to local people equipped with indigenous traditional knowledge.

Community forest user groups are willing to contribute in biodiversity conservation and shared their funds for environmental conservation activities.

The implementation of CBCP exposed that partnership and collaboration of community forest user group and federations such as FECOFUN is possible and would help for easy, smooth and timely implementation of biodiversity conservation initiatives. Forest user groups networking such as FECOFUN can be taken as an appropriate implementing partner for biodiversity conservation activity.

The local level stakeholder consultation could build a consensus on the present situation of biodiversity status and help developing strategies for future action.

The local level networking expressed their commitment to initiate conservation activities with the partnership with the respective forest user group and local government.

Local people are not only able to classify loss of biodiversity but also be able to initiate some activities to conserve biodiversity of the forest area. This can be considered as a milestone awareness activity at user level.

The biodiversity conservation issue should be considered not at individual community forest but at broader landscape level and there should be a mechanism for linking and networking forest user groups. The strengthening of VDC level forest user group networking could be an approach.

The local people are able to link species ecology and habitat. For example Rhododendron arboretum –national flower- is not common of this altitude, but seeing its existence in the community forests, users conserved this species in the forest.

There was significant demand for alternative biogas which has huge potential too. It has multiple implications on demand and supply of fodder resources. It help reducing fodder demands from public forest as farmers are encouraged in maintaining more fodder trees to maintain livestock. The increase private trees will also help improve supply of fodder and thereby preserving forests. In addition, smoke free environment has a positive role in improving women health in rural areas of Nepal.

Global community should consider paying for the environmental services provided by rural people living in subsistence. Such initiation could be carbon trading, or species conservation value.

Annex 1: Final performance of the CBCP

S.N.	Activity proposed	Outputs
1	Assessment of biodiversity in Bharkhore CFUG	Present status of biodiversity was investigated.
2	Revision of existing preparation plans incorporating bio-diversity issues	The operation plan included more specific issues for biodiversity conservation such as establishment of biodiversity monitoring plots, species listing.
3	Formation of CFUG network at VDC level	A VDC level network of six community forest user groups of the Siwalaya VDC was formed and maintained.
4	*In situ* conservation of unique floral species	Two species conservation plots 1. *Rhododendron* arboretum 2.*Castonopsis* spp, were established
5	*Ex-situ* conservation of important species through private forestry/CF action	Seedlings of 11 species (Siplikan, Neem, Timur, Rudraksha, Ashok, Sugnadawal, Katahar, Tanki, Lapsi, Bakaino, Kurilo) were distributed to individual farmers for private plantation and forest user group for community plantation.
6	Promoting alternative energy biogas	Two farmers were supported to establish two units of biogas plants.
7	Training on identification of important species, habitats and their conservation and best practices	Training for income generation was conducted for 16 farmers.
8	Training on domesticating valuable multipurpose species	A training to enhance domestication of valuable species was organized for 16 participants.
9	Training on income generation activities through development of agro-forest based enterprises	One event of training on plough making was provided for 20 participants
10	Publication of brochures on bio-diversity status of Bharkhore CFUG- local language	A leaflet describing biodiversity status of Bharkhore was published.
11	VDC and local level sharing workshops	One event of Siwalaya VDC level sharing workshop participating by 30 individuals was organized.
12	Training on capacity building of local level service providers	One event of training on biodiversity conservation and rural livelihoods was organized to 16 participants from district level line agencies.
13	Defining participatory biodiversity conservation criteria at CFUG level	Biodiversity conservation criteria developed through an interaction workshop with 21 elderly people and CFUGs workshop.
14	Identification of threatened, rare and endangered species at CFUGs level	A list of species on different category in the Siwalaya VDC prepared.
15	Establishment of demonstration plot	One demonstration plot established in the Bharkhore CFUG.
16	Expanding through VDC/local level workshop	One event of workshop with 20 participants was organized
17	Mobilize Community Forestry Fund for IG activities	Two farmers (one woman) supported for goat rearing as an income generating activity.

Annex 2: Present status of plant diversity

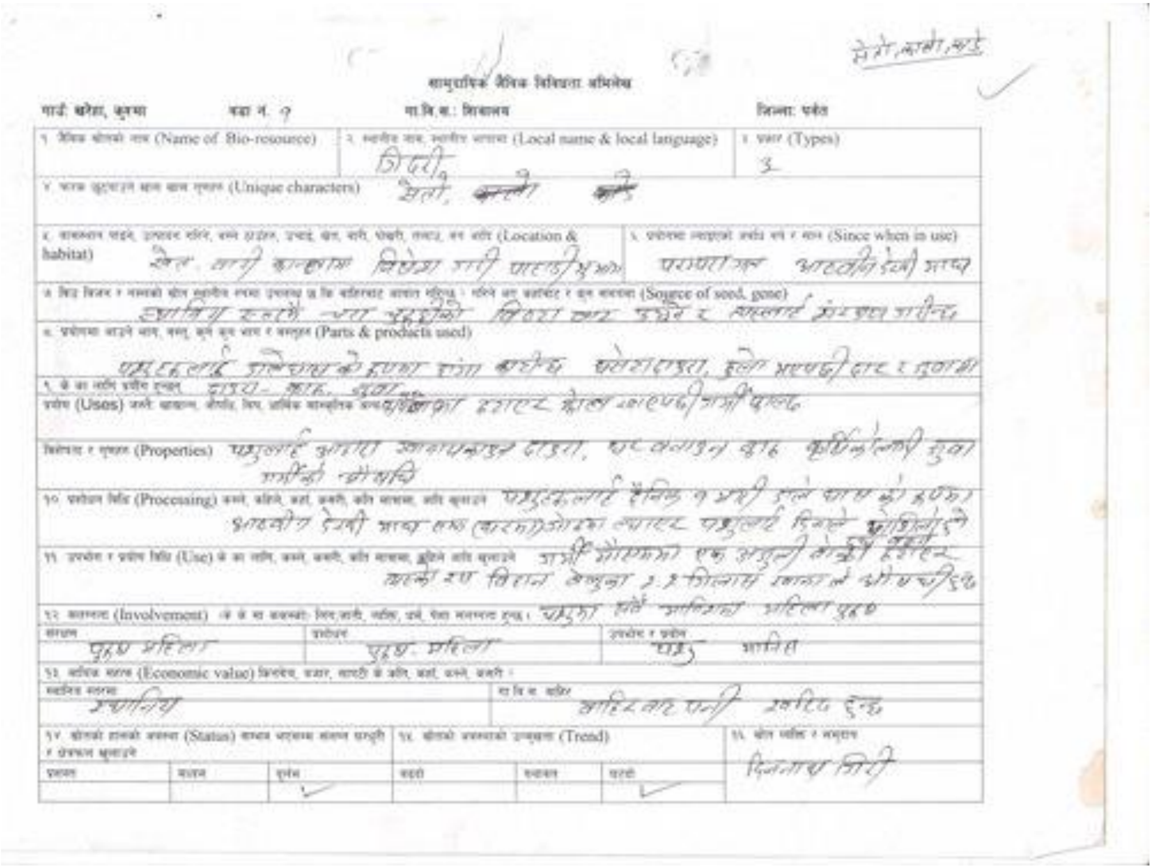
SN	Local name	Botanical name
Tree species		
1	Amala	Emblica officinalis
2	Ankhitare	Heyna trijuga
3	Archal	Antidesma diandrum
4	Bairo	
5	Bakaino	Melia azedarach
6	Bhakimlo	Rhus javanica
7	Chilaune	Schima wallichii
8	Chille	Rhamnus nepalensis
9	Chuchaino	
10	Dhalekatus	Castanopsis indica
11	Gayo	Bridelia retusa
12	Ghokro	
13	Guhenlo	Elaeagnus latifolia
14	Harro	Terminalia chebula
15	Jamuno	Syzigium cumini
16	Kalokainyo	Wendlandia excerta
17	Kori (Putalikath)	Cassine glauca
18	Kutmiro	Litsea monopetala
19	Kyamuno	Syzigium cerasoides
20	Laligurans	Rhododendron arborium
21	Saj	Terminalia tomentosa
22	Sakhino	Indigofera cylindrica
23	Sal	Shorea robusta
24	Salla	Pinus roxburghii
25	Sandan	Ougeinia oogeinensis
26	Simal	Bombax ceiba
27	Sindure	Mallotus philippinensis
28	Sissoo	Dalbergia sissoo
29	Tiju	Diospyrus melanoxylon
Shrub species		
1	Ainselu	Rubus elipticus
2	Amili	Securinega leucopyrus
3	Angeri	Goldfussia penstemonoides
4	Angeru	Lyonia ovalifolia
5	Araharekanda	Caesalpnia decapetela
6	Bankapas	Thespesia lampas
7	Bhorlo	Bauhinia vahilii
8	Dhairo	Woodfordia fruticosa
9	Dhursul	Solanum verbascifolium
SN	Local name	Botanical name
Herbs, Grasses and Climbers		
1	Ankhejhar	Equisetum diffusum
2	Ankhleghans	Chirita urticaefolia
3	Babio	Eulaliopsis binata
4	Banmara	Eupatorium adenophorum
5	Banso	Eragrostis tanella
6	Bantulasi	Ocimum basilicum
7	Batulpatelahara	Stephania elegans
8	Bhalupailelahara	
9	Chari amilo	Oxalis corniculata
10	Chhimchhimejhar	
11	Dankerno	
12	Dansinkoghas	
13	Dapsu	Heteropogon contortus
14	Deusiphul	
15	Dudhelahara	Trachelospermum lucidum
16	Dwarephul	
17	Faletoghas	
18	Ganhaunelahara	
19	Golkakri	Coccinia grandis
20	Guhesotter	
21	Hadchurlahara	
22	Hadeunnue	Gleichenia gigantea
23	Ikiroghans	
24	Kamarelahara	
25	Khar	Typha angustata
26	Kharuko	Pogonatherum incans
27	Kuro	Kyathula capitata
28	Lahareghas	
29	Lutelahari	
30	Motho	Cyperus rotundus
31	Ningaleghans	
32	Paniamala	
33	Pyarephul	
34	Pyauli	Reinwardtia indica
35	Siru	Imperata species
36	Sottareunnue	
37	Suntikilahara	
38	Tapre	Cassia isoptera
39	Tapre Ghans	
40	Thakal	Argemone mexicana
41	Titepati	Artemesia vulgaris

Annex 3: Present status of the species showing dynamism

Local name	Latin name
Under threat	
Baj	*Falco spp*
Bhorla	*Bauhinia vahlii*
Dabdabe	*Garuga pinnata*
Eagle	*Bubo nepalensis*
Imili	*Tamarindus indica*
Jamano	*?*
Kite	*Milvus spp*
Koiralo	*Bauhinia variegata*
Lalupate	*Poinsettia pulcherrima*
Palans	*Butea monospermae*
Pangra	*Entada scandeus*
Saj	*Terminalia alata*
Simali	*Vitex negundo*
Siplikan	*Crataeva reliogiosa*
Siundi	*Euphorbia royaleana*
Snakes	*Ptyas spp*
Theuwa	*Eurystomus orientalis*
Vulture	*Neophorn percnopterus*
Decreasing	
Asuro	*Adhatoda vasica*
Barro	*Terminalia belerica*
Bhyakur	*Discorea deltoidea*
Chiuri	*Bassia butyracea*
Dumri	*Ficus benjamina*
Dumsi	
Galaincha	*Plumeria rubra*
Gayo	*Bredelia retusa*
Harro	*Terminalia chebula*
Jamun	*Syzygium cumini*
Kabhro	*Ficus lacor*
Kahnyu	*Ficus cuminii*
Kera-malunge	*Musa sapintum*
Langur monkey	*Semenopithecus entellus*

Mauwa	*Engelhartia stricata*
Naspati	*Pyrus communis*
Phaledo	*Erythrina arborescens*
Phlans	*Butea monosperma*
Ritha	*Sapindus mukorossi*
Sital chini	
Increasing	
Bakaino	*Melia azedarach*
Banmara	*Eupatorium spp*
Chituwa	*Panthera paradus*
Dalchini	*Cinamomum zeylanicum*
Deer (ratuwa)	
Ipil-Ipil	*Leucaena leucocephala*
Khair	*Acacia catechu*
Lapsi	*Choerospondias axillaris*
Neem	*Azadirachta indica*
Paiynu	*Prunus cerasoides*
Rai Khannim	*Ficus semicardata*
Rato Kamila	
Sissoo	*Dalbergia sissoo*
Tooni	*Cedrala toona*

Annex 4:


सामुदायिक जैविक विविधता अभिलेख

(Name of Bio-resource)

(Local name & local language)

(Types)

(Unique characters)

(Location & habitat)

(Since when in use)

(Source of seed, gene)

(Parts & products used)

(Uses)

(Properties)

(Processing)

(Use)

(Involvement)

(Economic value)

(Status)

(Trend)